Modified Technique in Sample Preparation for Light Microscopy with Oil Immersion Objective Lens Imaging

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Abstract

Background: There is a growing need for contemporary application of microscopic techniques in laboratory practice. Moreover, the oil immersion microscopy is rarely done because of its intricacy. As such concerned scientists need to be abreast of the step-by-step procedures for preparing a biological specimen on the whole as well as method for increasing the resolving power of a microscope. **Aim:** To prepare slides from various organ systems with photomicrographs of different resolutions. **Materials and Methods**: Tissue samples were sourced from laboratory Wistar rats (*Rattus norvegicus*). Other research items included histopathology lab reagents as well as equipment including embedding mould, water bath, oven and rotary microtome. Standard method of paraffin embedding was used with some modification and sections stained with hematoxylin (Harris) and eosin. Images were prepared using a photomicroscope connected to a computer interface. **Results:** 500 pieces of microscope slides encompassing 20 different organ/tissue samples, with each mounted on 25 glass slides, while the photomicrographs taken at low (x100), high (x400) and higher (x1000) power magnifications were produced from the various specimens and saved on a disk. **Conclusion:** The outcome demonstrates the adequacy of the histological protocol used to guide researchers in related fields.

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